

## **ABSTRACT OF THE DISCLOSURE**

The interior of a vacuum chamber is maintained at a specified pressure by introducing a specified gas into the vacuum chamber having a plasma trap provided therein. Simultaneously, therewith, evacuation of the chamber is performed by a pump as an evacuating device, and a high-frequency power of 100 MHz is supplied to a counter electrode by counter-electrode use high-frequency power supply. Thus, uniform plasma is generated within the vacuum chamber, where plasma processing such as etching, deposition, and surface reforming can be carried out uniformly with a substrate placed on a substrate electrode.